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Universal Requisition for Waste Data Collection

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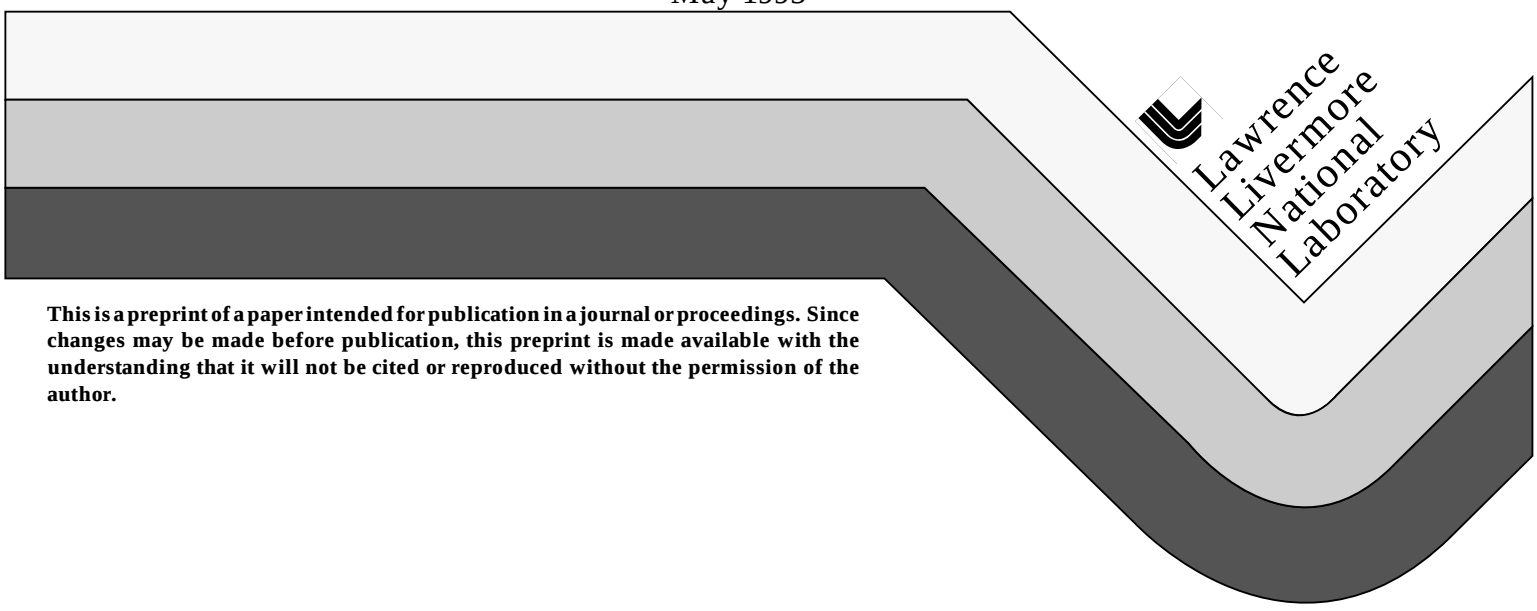

UNIVERSAL REQUISITION FOR WASTE DATA COLLECTION

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ABSTRACT

Lawrence Livermore National Laboratory (LLNL) has developed a data management tool for information gathering that encompasses all types of waste generated by the site. It is referred to as the Universal Requisition. It can be used to record information for the following types of waste: non-hazardous, hazardous, low level radioactive, mixed, transuranic (TRU), and TRU mixed wastestreams. It provides the salient information needed for the safe handling, storage, and disposal of waste, and satisfies our regulatory, record keeping, and reporting requirements.

There are forty two numbered fields on the requisition and several other fields for signatures, compatibility codes, internal tracking numbers, and other information. Not all of these fields are applicable to every type of waste. As an aid to using the Universal requisition, templates with the applicable fields highlighted in color were produced and distributed. There are six different waste type templates. Each is highlighted in a different color.

The amount of information required to properly identify, characterize, and code for regulatory purposes is dependent on the type of waste. If a waste contains hazardous as well as radioactive components, more information is required than if the waste contains only hazardous components. Likewise, TRU radionuclides need to be further identified as to grade, i.e.: weapons, fuel, mixed, or americium enriched.

Prior to the inception of the Universal Requisition, there were four different types of waste requisitions in use. They did not share a similar format or content. The task of combining all of the pertinent information from these four waste requisitions into one 11" by 8.5" requisition was not trivial. This paper will present the combined efforts of a multidisciplinary team of waste management and associated professionals.

INTRODUCTION

The means of identifying and recording the contents of a container of hazardous, radioactive, or mixed waste has been refined and made more comprehensive as the regulations covering such materials have also become more comprehensive. Waste management industries and regulations have progressed far beyond the stage where "STUFF MADE BY SOMEONE IN DEPARTMENT XYZ" is considered sufficient information. At Lawrence Livermore National Laboratory (LLNL), we collect so much information on the source of the waste, the process that produced the waste, the physical and chemical description of the waste, the federal, state, and locally defined hazards of the waste, and we identify the waste with so many government and internally mandated codes, that near to divine inspiration was required to devise a method to fit all of this information on one requisition.

Prior to the development of the Universal requisition, LLNL used four different requisitions. The Hazardous Waste Disposal Requisition was used for hazardous and non-hazardous waste. The TRU Waste Disposal Requisition, in conjunction with TRU Waste Parcel Cards, was used for waste containing transuranic radionuclides. The Low-Level Waste Disposal Requisition (LLW), in conjunction with Low-Level Waste Parcel Cards, was used for low-level radioactive waste from wastestreams certified for transfer to a radioactive waste storage facility such as the Nevada Test Site (NTS). The Radioactive Waste Disposal Requisition was used for low level radioactive and mixed waste not certified for transfer to a radioactive waste storage facility.

To combine all four requisitions into one, the existing Hazardous Waste Disposal Requisition was reorganized to include radiological information fields for both low-level and TRU waste, along with the information on hazardous constituents and properties. In addition, inspection and certification signatures required for various types of radioactive waste were added. We accomplished the task of incorporating new fields by the creative and more efficient use of space.

THE ORGANIZATION OF THE UNIVERSAL REQUISITION

At the top of each Universal requisition is a unique six digit number preceded by the letter "W" which serves as a tracking device for this particular waste item(s). Figures 1 and 2 are examples of the front and reverse side of the Universal requisition. The Universal requisition is 11" x 8.5" in size. It is composed of four copies of the requisition bound together: the Hazardous Waste Management (HWM) copy, the container copy, the temporary container copy, and the generator copy. After the waste generator completes the requisition, the temporary container copy is removed and attached to the side of the waste container. The rest of the requisition is submitted to HWM for completion, review, and approval signature. Once the requisition has been completed, reviewed, and approved, the HWM copy is removed for data entry and then filed as an official record of the waste. The remainder of the requisition is returned to the generator where the temporary container copy is removed from the waste container and replaced by the signed and approved container copy. The generator copy is retained by the waste generator as a record of the waste.

The waste generators, assisted by HWM field technicians, are required to complete the forty two numbered fields on the requisition. As an aide for the generators, we have included two full pages of instructions with every requisition which explain in detail how to fill in information in each field. Fields 1-22 provide background information for the waste's hazards, origin, container size and type, and other miscellaneous information. Field 1, where the generator identifies the waste type based on waste composition, dictates the type of label to be placed on the waste container. Generators are given a series of colored requisition templates to assist them in filling out requisitions for various types of waste. Each template indicates the fields that must be completed for that type of waste. Figure 3 is an example of a color highlighted hazardous waste requisition and Figure 4 is an example of a color highlighted Low Level radioactive waste requisition. Fields 4-12 identify the building and room number where the waste was generated, whether the area is a Radioactive Materials Management Area (RMMA), the time frame of waste generation, the Directorate and account number any waste charges should reflect, and any waste minimization efforts practiced in the generation of this waste. The list of Waste Minimization numbers and their definitions are listed on the reverse side of the bottom copy of the Universal requisition.

To facilitate the treatment and disposal of hazardous waste at LLNL and to assure that waste does not need to be managed for its radioactive content, all locations capable of generating material contaminated with radioactive materials are identified. A team of Health Physicists review and update the RMMA status of all work areas on a continuing basis. The RMMA status written on a waste requisition is verified by two independent certification teams before the waste may be treated or shipped off site for disposal. If a waste has been generated in a RMMA the generator completes fields 32 -35, certifying whether or not their waste was kept isolated from operations that could have produced radioactive contamination and that the waste was not exposed to particle beams capable of inducing radioactivity by activation. The certification of no rad added is done in accordance with Federal, State and local policies, as well as DOE Order 5820.2A.

Package seal numbers and the identification numbers of any inspection cards required in the certified waste program are recorded in Field 15. The EPA Source Code, recorded in field 16, is chosen from a list of source codes estabilished by EPA. The Source Codes used at LLNL are chosen from a shortened and customized version of the EPA list. The list of source codes and their definitions are listed on the reverse side of the bottom copy of Universal requisition. See Table 1 for the customized list of source codes. Field 17 is for waste profile and process knowledge evaluation numbers which are internal programs employed at LLNL to characterize recurring, consistent wastestreams. LLW wastestream and TRU wastestream numbers are recorded in field 18 and refer to certified waste items slated for disposal at NTS. The physical form of the waste is checked off in field 19. The federal and/or state hazardous properties are recorded in field 20. The waste's outer container type and size are identified in fields 21 and 22.

A comprehensive description of each waste item and its associated hazardous constituents are contained in fields 23-31. The waste description follows a generic pattern that provides detail and maintains consistency. Information in Field 24 indicates whether the waste item is spent or unused and is of value when disposing of the waste by the most appropriate means. Waste description, Field 25, requires the following four pieces of information: a generic chemical waste description, a brief common description of the waste, the waste's matrix with percentages, and, if available, the names of manufacturers of commercial products contained in the waste.

For field 25, the generator chooses one of the following generic chemical waste descriptions:

- organic liquids
- inorganic liquids containing <10% organics
- organic solids
- inorganic solids containing <10% organics
- organic sludges
- inorganic sludges containing <10% organics
- organic gases,
- inorganic gases containing <10% organics

This is followed by a brief description of the waste (e.g.vacuum pump oil, trimsol coolant wash water, lab trash). Next, the generator identifies the matrix, or major component(s), of the waste and lists the percentages (e.g. water 99%, stainless steel 80%, wood/paper/plastic 75%, asbestos 100%). When commercial products are found in the waste the generator lists the name of their manufacturers. LLNL maintains a computerized database of over six thousand commercial products, their manufacturers, and their associated hazardous components. This database can be accessed by generators and field personnel to assist in compiling this information.

In field 26 the components that make the waste hazardous and their concentrations are listed in descending order. Major components that contribute to the hazardous properties of the waste should be consistent with those listed on the waste label. Waste generators are provided with a Waste Acceptance Criteria(WAC) Manual that contains a table of one hundred sixty three common wastestreams and example waste descriptions that can be used as an aide in filling our information on the Universal Requisition. Table 2 is an exerpt from this common wastestreams table. See Table 3 for examples of waste descriptions.

The bottom third of the Universal requisition deals with radiological information and contains fields for required signatures. Fields 32-35, as explained above in the RMMA status description, contains statements of certification to meet the requirements of no added radioactivity in hazardous waste.

Fields 36-41 are completed for radioactive waste items only. In field 36, for TRU and Low Level certified waste containing uranium or plutonium, all appropriate boxes which indicate the grades of plutonium and uranium present in the waste are checked. At the bottom of this field the generator can specify the weight of the TRU waste package.

Field 37 is used to record the radionuclide(s) present in the waste and activity levels. Units of activity are listed in curies, nanocuries, picocuries, etc. For TRU and Low Level certified waste, "T" (for total) is entered under "item" and total activity for each radionuclide is transcribed from corresponding parcel cards. When the entire waste package has been assayed, "A" (for assayed) is entered under "item" and the assayed radionuclides and their activities are listed.

The radioactive and swipe survey of the waste container, fields 38 and 39 are performed as a safety measure to minimize radioactive exposure to all personnel. Field 40 contains the signature, and other identifying information, of the Hazards Control technician who performed the radiological survey. Field 41 contains the signature, and other identifying information for the employee who performed the radioassay, if taken.

In addition to the numbered fields on the Universal requisition, there are unnumbered fields for recording other pertinent information retained by LLNL. Above field 16 is a field for the Retention Tank ID# and a field for the RSDR # (Retention System Disposal Request #). They are internal tracting numbers which identify the retention tank and associated documentation pertinent for determining whether the waste can be discharged to the municipal sewer system.

In the upper right hand corner of the requisition is an unnumbered field used to identify the Compatibility Code(s) associated with the waste. Compatibility Codes were developed at LLNL to alert waste handlers to potential hazards that may or may not be covered by federal or state hazard classifications. The Compatibility Codes supply additional hazard information where federal and state hazard classification do not. For example, compatibility codes can be used to differentiate oxidizers from other materials regulated as ignitable.

Compatibility Codes suggest, rather than dictate, a more conservative and cautious approach to handling and storing hazardous materials.

The following is a list of the Compatibility Codes, what they represent and their incompatibilities.

- CA Corrosive Acid: incompatible with CB, W/AR, RC
- CB Corrosive Base: incompatible with CA, W/AR
- OX Oxidizer: incompatible with FM, NAL
- FM Flammable Material: incompatible with OX, W/AR, RC
- AQ Aqueous: incompatible with W/AR
- W/AR Water/Air Reactive: potentially incompatible with materials from all other categories
- RC Reactive Constituents: incompatible with CA, FM, W/AR
- NAL Non-Aqueous Liquid: incompatible with OX, W/AR

Table 4 shows the Compatibility Codes matrix used to indicate incompatible storage scenarios.

The bottom right hand corner of the Universal requisition contains a field for the RMMA Certification. As mentioned above in the RMMA status explanation, two independent cerification teams verify the RMMA status of the work area by stamping and initialing this field after verifying the RMMA status of room where the waste was generated.

Below field 36 is the area where the tare weight of the TRU waste container is recorded. This weight is subtracted from the total weight when TRU nuclide calculations are made. The remainder of the fields are for signatures.

The fields on the reverse side of the Universal requisition are filled out by HWM personnel in chemistry and waste tracking. The top section identifies each item of waste in the waste container by numerous government and LLNL mandated codes, indentification numbers, and associated hazards. The RCH (recharge) and RCH prefix are used to assign a code that corresponds to the estimated cost per unit weight or volume of a waste item. The P field is used to identify waste items that are drugs or drug precursors; information required by the state regulations. EPA Origin Code is used to designate the origin of the waste, ie: was it generated as the result of routine work or research, from a spill, during remediation activities or from on site treatment activities.

The waste item's associated EPA Form Codes have become an important tool used to characterize waste, identify the established wastestream that a waste item is a part of, identify any laboratory analysis that may be required to characterize the waste, and break down waste into further sub-categories for regulatory reporting purposes.

Into the EPA number field are written all pertinent EPA waste codes used to identify hazardous properties or the components whose concentrations are above RCRA regulatory limits as defined in 40CFR, Part 261.

The DTSC (Department of Toxic Substances Control) number is used to characterize a wastestream or list a restricted waste with concentrations above California regulatory limits. DTSC numbers describe the process which produced the waste ("521 Drilling mud"), the waste's overall composition("132 Aqueous solution with metals..."), the waste's hazardous contaminants ("711 Liquids with cyanides ≥1000 Mg/L"), and/or the waste's hazardous properties ("122 Alkaline solution without metals..."). This information is contained in Title 26 of the State of California Waste Regulations.

The MSDS (Material Safety Data Sheet) Number is an internal tracking system number for a given Material Safety Data Sheet (MSDS) which describes a commercial product or pure chemical. LLNL has almost ten thousand Material Safety Data Sheets of commercial products and pure chemicals on file.

The state and federal hazardous properties of each waste item are identified in the far upper right hand field. These are broken down to reflect individual items that may be contained within a waste container, but collectively they must match the properties listed in field 20 on the front of the requisition.

The Waste Status section is used to identify individual waste items as being one or more of the following:

- RCRA Hazardous Waste
- Non-RCRA Hazardous Waste
- Acutely/Extremely Hazardous Waste
- Biohazardous Waste
- PCBs (5 ppm to <50)
- TSCA/PCBs (≥50 ppm)
- Ozone-Depleting Substances
- Explosive Waste
- Originating from CHEW (Chemical Exchange Warehouse); Lawrence Livermore National Laboratory's unused chemical recycling program

This information is retained and is helpful in identifying particular wastes for handling and reporting purposes.

The Scheduled Date section indicates the date the item is scheduled to be picked up for transport to the facility, shipped directly off site, pumped out to a tanker, processed, or sent to sewer.

CONCLUSION

We succeeded in the task we undertook, to combine four different waste requisitions into one Universal requisition. It encompasses information which makes it possible for us to characterize waste and meet regulatory reporting requirements. It is intelligible for the generator to use with ease.

We consider this new Universal requisition a living/working document. This requisition will undergo bold and subtle changes as we continue to improve on the original concept.

ACKNOWLEGMENTS

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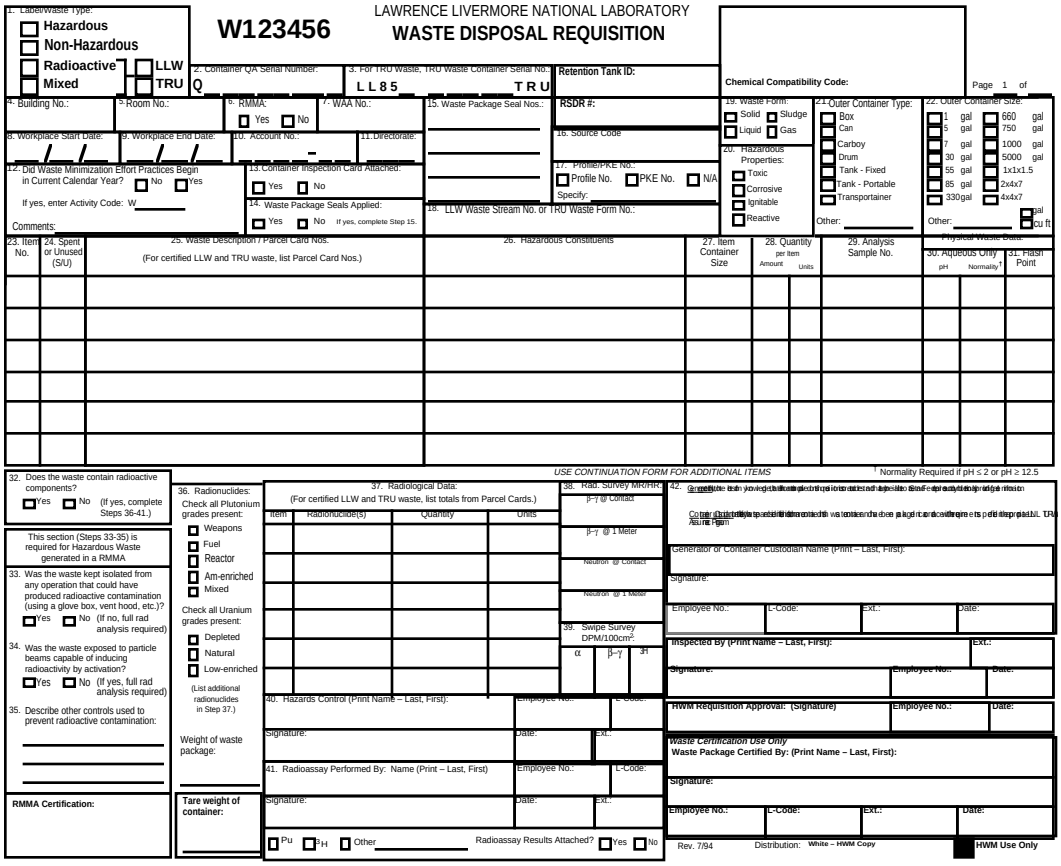
Figure 1. The Universal Requisition Front Page



LAWRENCE LIVERMORE NATIONAL LABORATORY

WASTE DISPOSAL REQUISITION

W123456

1. Label/Waste Type: ☐ Hazardous ☐ Non-Hazardous ☐ Radioactive ☐ LLW ☐ TRU ☐ Mixed

2. Container QA Serial Number: Q

3. For TRU Waste, TRU Waste Container Serial No.: LL85 TRU

Retention Tank ID:

Chemical Compatibility Code:

Page 1 of

4. Building No.:

5. Room No.:

6. RMMA: ☐ Yes ☐ No

7. WAA No.:

15. Waste Package Seal Nos.:

RSDR #:

16. Source Code

17. Profile/PKE No.: ☐ Profile No. ☐ PKE No. ☐ N/A Specify:

18. LLW Waste Stream No. or TRU Waste Form No.:

19. Waste Form: ☐ Solid ☐ Sludge ☐ Liquid ☐ Gas

20. Hazardous Properties: ☐ Toxic ☐ Corrosive ☐ Ignitable ☐ Reactive

21. Outer Container Type: ☐ Box ☐ Can ☐ Carboy ☐ Drum ☐ Tank - Fixed ☐ Tank - Portable ☐ Transportainer Other:

22. Outer Container Size: ☐ 1 gal ☐ 5 gal ☐ 7 gal ☐ 30 gal ☐ 55 gal ☐ 85 gal ☐ 330 gal ☐ 660 gal ☐ 750 gal ☐ 1000 gal ☐ 5000 gal ☐ 1x1x1.5 ☐ 2x4x7 ☐ 4x4x7 Other: gal ☐ cu ft

Physical Waste Data:

8. Workplace Start Date:

9. Workplace End Date:

10. Account No.:

11. Directorate:

12. Did Waste Minimization Effort Practices Begin in Current Calendar Year? ☐ No ☐ Yes If yes, enter Activity Code: W

13. Container Inspection Card Attached: ☐ Yes ☐ No

14. Waste Package Seals Applied: ☐ Yes ☐ No If yes, complete Step 15.

Comments:

23. Item No.	24. Spent or Unused (S/U)	25. Waste Description / Parcel Card Nos. (For certified LLW and TRU waste, list Parcel Card Nos.)	26. Hazardous Constituents	27. Item Container Size	28. Quantity per Item Amount	28. Quantity per Item Units	29. Analysis Sample No.	30. Aqueous Only pH	30. Aqueous Only Normality†	31. Flash Point

USE CONTINUATION FORM FOR ADDITIONAL ITEMS

† Normality Required if pH ≤ 2 or pH ≥ 12.5

32. Does the waste contain radioactive components? ☐ Yes ☐ No (If yes, complete Steps 36-41.)

This section (Steps 33-35) is required for Hazardous Waste generated in a RMMA

33. Was the waste kept isolated from any operation that could have produced radioactive contamination (using a glove box, vent hood, etc.)? ☐ Yes ☐ No (If no, full rad analysis required)

34. Was the waste exposed to particle beams capable of inducing radioactivity by activation? ☐ Yes ☐ No (If yes, full rad analysis required)

35. Describe other controls used to prevent radioactive contamination:

RMMA Certification:

36. Radionuclides: Check all Plutonium grades present: ☐ Weapons ☐ Fuel ☐ Reactor ☐ Am-enriched ☐ Mixed

Check all Uranium grades present: ☐ Depleted ☐ Natural ☐ Low-enriched

(List additional radionuclides in Step 37.)

Weight of waste package:

Tare weight of container:

37. Radiological Data: (For certified LLW and TRU waste, list totals from Parcel Cards.)

Item	Radionuclide(s)	Quantity	Units

☐ Pu ☐ PH ☐ Other Radioassay Results Attached? ☐ Yes ☐ No

38. Rad. Survey MR/HR: β–γ @ Contact; β–γ @ 1 Meter; Neutron @ Contact; Neutron @ 1 Meter

39. Swipe Survey DPM/100cm²: α; β–γ; 3H

40. Hazards Control (Print Name – Last, First): Employee No.: L-Code: Signature: Date: Ext.:

41. Radioassay Performed By: Name (Print – Last, First) Employee No.: L-Code: Signature: Date: Ext.:

42. [illegible] Container Custodian Name (Print – Last, First): Signature: Employee No.: L-Code: Ext.: Date:

Inspected By (Print Name – Last, First): Ext.: Signature: Employee No.: Date:

HWM Requisition Approval: (Signature) Employee No.: Date:

Waste Certification Use Only

Waste Package Certified By: (Print Name – Last, First): Signature: Employee No.: L-Code: Ext.: Date:

Rev. 7/94 Distribution: White – HWM Copy ☐ HWM Use Only

Figure 2. The Universal Requisition Reverse Side

Item	RCH Prefix	RCH	P	Origin Code	Form Code	EPA No.	DTSC No.	MSDS No.	Hazardous Properties T	C	I	R
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

Waste Status: For each waste item, check all that apply.

Item No:						
RCRA Hazardous Waste						
nonRCRA Hazardous Waste						
Acutely/Extremely Hazardous Waste						
Medical Waste (T = Treated, U = Untreated)						
PCBs (5 ppm to < 50 ppm)						
TSCA/PCBs (≥ 50 ppm)						
TSCA/Asbestos						
Ozone-Depleting Substances						
Explosive Waste						
Originating from CHEW						

Scheduled Date: / /

☐ HWM Waste Run

☐ LLNL Intrasite Shipment

☐ Commercial Shipment

☐ Processed Waste

☐ Secured Pickup

☐ HWM Field Pump Out

☐ HWM Generated Waste

☐ Sewer: _____

Date: / /

Void Requisition:

☐ Date: / /

Initials/Date:

RTO / /

WTO / /

Figure 3. The Universal Requisition Shaded For Hazardous Waste

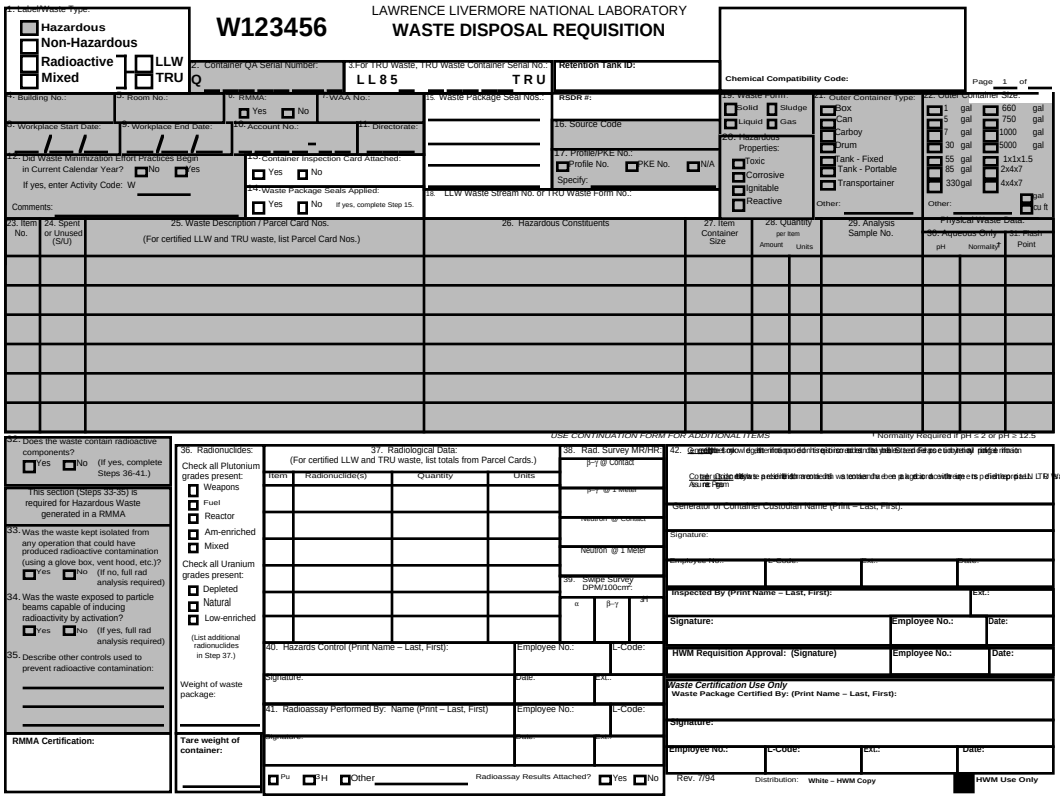


Figure 4. The Universal Requisition Shaded For Low Level Radioactive Waste

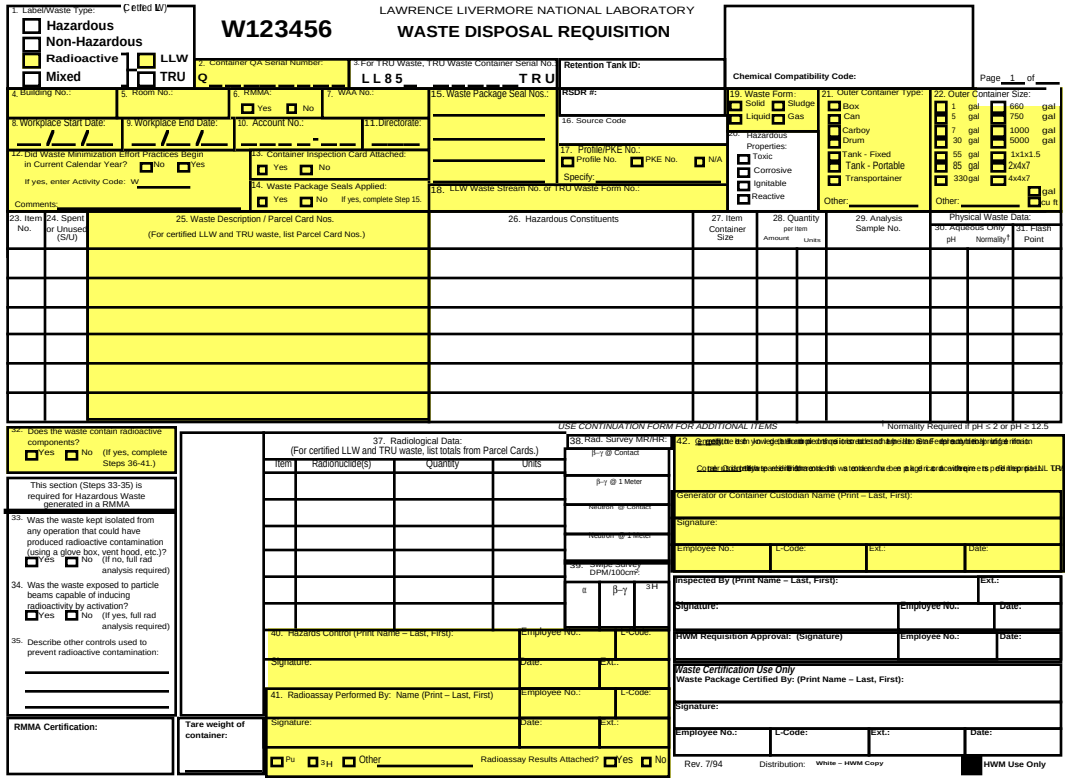


Table 1. Source Codes and Descriptions

CLEANING/DEGREASING OPERATIONS

A010 Stripping
A020 Acid cleaning
A030 Caustic (Alkali) cleaning
A040 Flush rinsing
A050 Dip rinsing
A060 Spray rinsing
A070 Vapor degreasing
A080 Physical scraping and removal
A090 Clean out process equipment
A092 Non-routine Clean out process equipment
A191 Cleaning with Solvents
A193 Steam Cleaning operation

SURFACE PREPARATION/FINISHING

A210 Painting
A220 Electroplating
A230 Electroless plating
A240 Phosphating
A250 Heat treating
A260 Pickling
A270 Etching
A293 Abrasives blasting operations
A294 Grinding/Polishing operations

OTHER PROCESSES

A310 Product rinsing
A320 Product filtering
A330 Product distillation
A340 Product solvent extraction
A350 By-product processing
A360 Spent catalyst removal
A362 Non-routine Spent catalyst removal
A370 Spent process liquids removal
A372 Non-routine Spent process liquids removal
A380 Tank sludge removal
A382 Non-routine Tank sludge removal
A390 Slag removal
A400 Metal forming
A410 Plastics forming
A491 Machining/welding operations
A492 Building construction/renovation
A493 Gardening operations (fertilizer/pesticide application)
A494 Cooling processes (machine/computer, etc.)
A495 Cooling Tower (regeneration of water deionizers)
A496 Photo developing/printing/copy machine/x-ray
A497 Explosives testing
A498 Microchip processing
A499 Building maintenance

ONE-TIME AND INTERMITTENT PROCESSES

A512 Non-routine Leak collection
A532 Non-routine Cleanup of spill residues
A540 Oil changes-maintenance
A542 Non-routine Oil changes
A55 Filter/Battery replacement
A562 Discontinue use of process equipment
A572 Discarding off-spec material
A582 Discarding out-of-date products or chemicals
A591 Freon Recharging
A592 Demolition/decontamination
A593 Equipment maintenance operations
A594 Hopsital/medical procedures
A595 Discarding empty containers
A596 Emptying retention tanks
A600 Sludge removal
A602 Non-routine Sludge removal

REMEDIATION DERIVED WASTE

A612 Superfund Remedial Action
A622 Superfund Emergency Response
A632 RCRA Corrective Action at solid waste management unit
A642 RCRA closure of hazardous waste management unit
A652 Underground storage tank cleanup
A692 Other remediation

POLLUTION CONTROL OR WASTE TREATMENT

A710 Filtering/screening
A720 Metals recovery
A730 Solvents recovery
A740 Incineration/Thermal treatment
A750 Wastewater treatment
A760 Sludge dewatering
A770 Stabilization
A780 Air pollution control devices
A790 Leachate collection
A792 Asbestos removal/abatement
A793 Waste analysis (i.e. samples)
A794 Berm water collection

OTHER PROCESSES

A910 Clothing and personal protective equipment
A920 Routine cleanup wastes (e.g., floor sweepings)
A932 Non-remediation closure of management units/equipment
A940 Laboratory wastes (excluding biomedical)
A942 Non-routine Laboratory wastes (i.e. close-out)
A943 Biomedical laboratory waste
A990 Other
A992 Non-routine Other

Table 2. Requisition Waste Descriptions For Common Wastestreams

The majority of waste produced on site can be described using one of the wastestream descriptions listed below. The information listed to the right of each wastestream description may be used to complete the waste description sections of the Waste Disposal Requisition.

INORGANIC LIQUIDS - Waste that is primarily inorganic and highly fluid (e.g. aqueous) with low suspended inorganic solids and low organic content (<10%).	**Spent or Unused Waste**	**Generic Waste Description**	**Generator's Waste Description**	**Waste Matrix**
Aqueous waters with low dissolved solids, including rinse waters from the following operations: copper vapor laser operation, metal finishing, machine coolant replacement, water jet cutting, printed circuit board fabrication, and equipment cleaning.	spent	Inorganic Liquid	(e.g. rinse water from copper vapor laser ops)	(e.g. water 99%)
Inorganic aqueous solutions with high total dissolved solids. Includes photographic fixers and developers, surplus aqueous inorganic chemicals, weak acids and caustics, steam cleaning and soapy rinse water, and machine or shop waste coolants.	-	Inorganic Liquid	(e.g. aqueous photo-developer waste)	(e.g. water 90% sodium bisulfite 5%)
Mercury liquid waste from laboratory and shop clean-up, clean out of sink traps, and collection of excess electron tubes and mercury switches.	spent	Inorganic Liquid	(e.g. liquid mercury from sink traps)	(e.g. mercury 99% dirt 1%)
Halogenated solvents from on-site lab operations such as cleaning, degreasing, and electronic manufacturing. Wastes aremainly composed of chlorinated and flourinated solvents such as Freon, TCE, PCE, DEC, and TCA.	spent	Organic Liquid	(e.g. degreasing solvents)	(e.g. trichloroethane 75% trichloro-ethylene 25%)
Organic paint, lacquer or varnish from activities including: equipment clean-up, disposal of excess and waste paint, laser printer, copier and graphic production waste.. Waste includes lacquer thinner and paints. Waste may be ignitable.	-	Organic Liquid	(e.g. excess paint)	(e.g. xylene 25% mineral spirits 45% pigments 20%)
Organic liquids received from document reproduction and print shop activities. Wastestreams include activators, photocopier toners, and dispersants. Most items in this category are excess or out-of-date copy machine, printer and print shop chemicals.	unused	Organic Liquid	(e.g. old out of date toner)	(e.g. isoparaffinic hydrocarbon solvents 90%)
Spill cleanup or decommissioned document reproduction equipment containing organic liquids.	spent	Organic Liquid	(e.g. toner spill cleanup)	(e.g. isoparaffinic hydrocarbon solvents 90%)

Table 3. Examples of Universal Requisition Hazardous Waste Descriptions

24 Unused or Spent	25. Description/Parcel Card Nos. (For certified LLW and TRU waste, list Parcel Card Nos.)	26. Hazardous Constituents
S	Organic Solid, Lab debris,>75% clothing/wipes/gloves, <25% gaskets/small parts	gallium arsenide <1% arsenic metal <1%
S	Inorganic Solid, empty drum from floor finish removal, >99% steel	zinc <1%
S	Organic Liquid, aqueous solution, 70% ethanol/30% water	ethanol 70%
U	Inorganic Solid, silicon carbide powder, Buehler	silicon carbide 100%
S	Inorganic Liquid, Aqueous acid waste from dye synthesis, 96% water	hydrochloric acid 2% sulfuric acid 1%
S	Inorganic Sludge, Steam pit sludge (clean out), >90% soil, <10% debris, <5% water	arsenic 7 mg/Kg barium 180 mg/Kg cadmium 6.3 mg/Kg lead 180 mg/Kg chromium 130 mg/Kg
S	Inorganic Liquid, Aqueous solution Black + White photo waste, >95% water, Kodak	silver 5-5000 mg/L
S	Organic Liquid, Used motor oil, >99% oil	tetrachloroethylene >0.7 mg/L
S	Inorganic Liquid, aqueous solution, >99% water	phosphoric acid <1%

Table 4. Compatibility Code Matrix Table

	CA	**CB**	**OX**	**FM**	**AQ**	**W/AR**	**RC**	**DS**	**NAL**
CA		**X**				**X**	**X**		
CB	**X**					**X**			
OX				**X**					**X**
FM			**X**			**X**	**X**		
AQ						**X**			
W/AR	**X**	**X**		**X**	**X**		**X**		**X**
RC	**X**			**X**		**X**			
DS									
NAL			**X**			**X**			

KEY: X Non-compatible
CA Corrosive Acid
CB Corrosive Base
OX Oxidizer
FM Flammable Material
AQ Aqueous
W/AR Water/Air Reactive
RC Reactive Constituents
NAL Non-Aqueous Liquid

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